

Determination: NFA

PA/VSİ Or RFA FILE REVIEW CHECKLIST

Facility Name: GMC Cadillac Motor Car Clark Plt _____

EPA ID: MID 005 356 704 _____ City: Detroit _____ State: MI _____

Name of Reviewer: Maureen McHugh _____ Date of Review: 8/6/08 _____

1	Yes	No	Is this a one folder site?
2	Yes	No	Are there Superfund files for this site?
3	Yes	No	Did you Read the Executive Summary?
			There are: <u>11</u> SWMUs and <u> </u> AOCs at this site.
4	Yes	No	Did you review the regulatory history?
5	Yes	No	Does the facility have interim status or a permit?
			This facility is a: <u> </u> SQG, <u>X</u> LQG, or <u> </u> Less than 90 day.
6	Yes	No	Was the Facility closed per RCRA? RCRAInfo 380 (1997)
			If Yes, was the closure: <u>X</u> CC, or <u> </u> CIP.
7	Yes	No	Are there documented (historical) releases? Briefly describe on Page 2.
8	Yes	No	Were there releases identified during the inspection? Briefly describe on Page 2.
9	Yes	No	Do you agree with the Conclusions and Recommendations?
			If No, briefly describe on Page 2.

As a result of your review of the PA/VSİ or RFA file, please classify this site as:

X No further corrective action recommended or warranted: These are sites that closed the regulated units and any other SWMUs or AOCs at the site did not warrant any further corrective action (no historic releases or evidence of releases observed during the Visual Site Inspection).

 Further Action Required: Soil or sediment sampling or groundwater sampling or monitoring or any type of investigation that was recommended in the report in response to a documented or observed release at any SWMU or AOC and where such investigation, whether being addressed during the inspection or after, does not have the necessary documentation in the facility record files.

 More Information Needed: There is no RFA, PA/VSİ or RCRA closure information available.

PA/VSI Or RFA FILE REVIEW CHECKLIST

Notes

Briefly describe any documented (historical) releases for any SWMU or AOC recorded in the report. For each release, please identify the SWMU or AOC and a one or two line description of release.

VOC contamination discovered in the soil discovered during closure of SWMU1. Excavation and disposal of the contaminated soils was proposed and awaiting approval at the time of the PA/VSI. The unit was clean closed in 1997.

Releases of hazardous wastes and regulated substances from several USTs. Initial abatement actions were taken and followed up with sampling and excavation of contaminated soil and debris. The UST system was closed

Briefly describe any releases observed during the inspection for any SWMU or AOC recorded in the report. For each release, please identify the SWMU or AOC and a one or two line description of release.

PA/VSI Recommendations

Excavation and removal of contaminated soil as described in the closure plan of SWMU1. The unit was clean closed in 1997. NFA is warranted.



**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**GMC CADILLAC MOTOR CAR CLARK PLANT
DETROIT, MICHIGAN
MID 005 356 704**

FINAL REPORT

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460**

Work Assignment No.	:	R05032
EPA Region	:	5
Site No.	:	MID 005 356 704
Date Prepared	:	January 30, 1992
Contract No.	:	68-W9-0006
PRC No.	:	209-R05032MI08
Prepared by	:	PRC Environmental Management, Inc. David Phillips
Contractor Project Manager	:	Shin Ahn
Telephone No.	:	(312) 856-8700
EPA Work Assignment Manager	:	Kevin Pierard
Telephone No.	:	(312) 886-4448

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EXECUTIVE SUMMARY

PRC Environmental Management, Inc. performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the GMC Cadillac Motor Car Clark Plant (GMC) in Detroit, Michigan. This report summarizes the results of the PA/VSI and evaluates the potential for releases of hazardous waste or hazardous constituents from identified SWMUs.

The GMC Cadillac Clark Plant covers a 120-acre area of south-central Detroit. Facilities for the manufacture of vehicle components, as well as ancillary offices, development laboratories, parking lots, a power plant, and a wastewater treatment plant are included in the plant site area. There are residences less than 0.25 miles from the site. Several schools and parks are located within a 1-mile radius of the facility.

GMC operations at the Clark Street facility began in 1920. Until 1987, the primary activity at the facility was the final assembly of Cadillac automobiles. Some automobile components to be used in assembly were manufactured. The major operations at the plant included machining, painting, electroplating, and plastic injection molding. Currently, the facility serves as the world headquarters for GMC's Cadillac Motor Car Division. It is primarily the center for administrative, engineering research, design, and testing. The remaining manufacturing processes at the facility include bumper electroplating and fabricating outer trim components.

The Clark Street plant generates wastewater from the remaining electroplating operations conducted at the facility. The wastewater is treated at an onsite treatment plant that produces a sludge (EPA Waste Code F006) that is stabilized at an off-site treatment facility. GMC also generates various acid/alkali wastes (D002), spent solvents (F001), and other wastes (F008 and D007) from electroplating activities. In addition, GMC generates spent solvents (F001, F005, and D001) and thinners (D001) from manufacturing and painting trim components.

GMC generates a lesser amount of waste from testing automobiles at its emissions and other research and performance laboratories. Specifically, these activities generate spent Stoddard solvent (D001) from carburetor testing and waste gasoline (D001) removed from automobiles undergoing emission testing.

GMC Cadillac Motor Car Clark Plant notified EPA Region 5 of hazardous waste activity and submitted a Part A permit application in 1980. GMC revised its original Part A in November 1981, requesting that EPA Region 5 exclude from interim status requirements all operations except the former container storage area (SWMU 1).

In 1987, GMC submitted a subsequent Notification of Hazardous Waste Activity, identifying the Clark Street Plant as a large quantity generator and revising the list of hazardous wastes generated at the site. GMC initiated closure of the former container storage area (SWMU 1) in 1988. GMC then submitted to the Michigan Department of Natural Resources (MDNR) a remedial action plan for the former container storage area. At the time of the VSI, GMC was awaiting approval of the plan. In addition, GMC considers the facility's present RCRA status to be that of a large quantity generator.

The PA/VSI identified the following 11 SWMUs at the facility:

Solid Waste Management Units

1. Former Container Storage Area
2. Current Hazardous Waste Accumulation Area
3. Underground Storage Tank 36 (UST-36)
4. Wastewater Treatment Plant
5. Copper and Nickel Reclaim Tank
6. Cyanide Drum Rinsing Station
7. Paint Sludge Dewatering Filter
8. Blue-Surf Incinerator
9. UST-77
10. Satellite Accumulation Area
11. Air Scrubber Collection Bin

No AOCs were identified at the facility.

Releases of hazardous constituents have been documented from the former container storage area (SWMU 1) and several underground storage tanks, including UST-36 (SWMU 3) and UST-77 (SWMU 9). These releases resulted in small amounts of surficial soil contamination.

GMC has removed and disposed of contaminated soils associated with releases from SWMUs 3 and 9. The underground storage tanks were either replaced or removed. Thus, the potential for releases of hazardous constituents from these units is low. The potential for the releases to reach ground water or surface water is considered low based on the presence of low

permeability soils underlying the site. Releases to air may have occurred during removal of USTs and contaminated soils; however, the removal activities occurred in December 1990 and January 1991, and the expected cold weather would have minimized any air releases.

GMC is awaiting approval from MDNR to excavate and dispose of contaminated soils at SWMU 1. The potential for the release of hazardous constituents to the air and surface water is low based on the presence of asphalt and concrete pavement above the contaminated soils and low permeability soils underlying the site. The potential for the release of hazardous constituents to perched ground water is low to moderate, depending on the height and amount of the perched water in the vicinity of the former container storage area. The threat of contamination of perched ground water to affect environmental receptors is minimal. The perched ground-water system consists of limited amounts of water and is not used as a public water source.

No releases of hazardous constituents from SWMUs 2, 4 through 8, 10, and 11 were identified during the PA/VSI. Furthermore, the potential for future releases from these units to on-site soils, surface water, ground water, or air is low, based on the following factors: (1) SWMUs 2, 5, 6, 10, and 11 have secondary containment; (2) SWMU 4 has inadequate secondary containment for portions of the unit, but all tanks, unit operations, and associated equipment appeared in good condition during the VSI; and (3) SWMUs 7 and 8 are no longer present at the facility, and their previous locations would have provided secondary containment in the event of a release.

All wastewater discharges from the facility enter the Detroit sewer system. GMC is subject to applicable Detroit water and sewerage pretreatment standards.

The Clark Street Plant has several existing air emission sources from electroplating, wastewater treatment, and power plant operations. These emissions are subject to MDNR air quality regulations. GMC has Wayne County Air Pollution Control Department permits for these sources.

Potential receptors of any releases from SWMUs or from the facility are limited. The entire site is covered by buildings, concrete, and asphalt. The nearest surface water body is the Detroit River, which lies 1.5 miles to the southeast of the site. Ground water is not known to be used in the vicinity of the Clark Street Plant. Access to the site is controlled by guards and barriers (fences and buildings).

ENFORCEMENT
CONFIDENTIAL

PRC recommends further action at one SWMU at the facility. Specifically, PRC recommends the excavation and removal of contaminated soils associated with the former container storage area (SWMU 1), as described in GMC's remedial action plan once the plan is approved by MDNR.

RELEASED

DATE 8/20/01

RIN #

INITIALS WV

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. R05032 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routing and systematic releases of waste or hazardous constituents. Such areas might include a wood preservative drippage area, a loading/unloading area, or an area where solvent used to wash large parts has continually dripped onto the soils

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic

basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm operational, SWMU, AOC, and release information obtained during the PA

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the GMC Cadillac Motor Car Clark Plant in Detroit, Michigan. The PA was completed on October 15, 1991, and included information from the files of the Michigan Department of Natural Resources (MDNR) and EPA Region 5 RCRA files. The VSI was conducted on November 15, 1991. It included interviews with GMC facility representatives and a walk-through inspection of the facility. Eleven SWMUs and no

AOCs were identified at the facility. The VSI is summarized and 12 inspection photographs are included in Attachment A. Field notes from the VSI are included in Attachment B.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, release history, regulatory history, environmental setting, and receptors.

2.1 FACILITY LOCATION

The GMC Cadillac Motor Car Clark Plant (GMC) is located at 2860 Clark Street in south-central Detroit, Wayne County, Michigan (latitude 42°10'38" N; longitude 83°06'50" W) (GMC, 1980). The facility occupies about 120 acres in an urban setting. Bordering the plant site on three sides are major rail yards. Michigan Avenue, a major commercial thoroughfare, skirts the north edge of the site (Figure 1). Across the rail yards are additional parking lots and a warehouse; older residential areas lie beyond (GMC, 1991b).

The entire site is covered by buildings, concrete, and asphalt. Included in the plant site are facilities for the manufacture of vehicle components, as well as ancillary offices, development laboratories, parking lots, a power plant, and a wastewater treatment plant (GMC, 1991b).

2.2 FACILITY OPERATIONS

GMC operations began at the Clark Street facility in 1920. Until 1987, the primary activity at the facility was the final assembly of Cadillac automobiles. Some automobile components to be used in assembly were manufactured at the facility. Major operations at the plant included machining, painting, electroplating, and plastic injection molding (GMC, 1980). GMC also operated a foundry for casting engines at the facility until the 1950s. GMC transferred machining operations to other Cadillac facilities during the late 1970s. Full-time assembly of Cadillac motor cars at the facility ceased in 1987 (PRC, 1991).

Currently, the facility serves as the world headquarters for GMC's Cadillac Motor Car Division. It is primarily the center for administrative, engineering research, design, and testing. Approximately 3,000 people are employed at the site. The remaining manufacturing processes at the facility include bumper electroplating and fabricating outer trim components. GMC intends to transfer the plating operations to other Cadillac facilities in 1992 (PRC, 1991).



SCALE 1:24000

1 MILE

1/2

0

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

SCALE: 1" = 2,000'

GMC CADILLAC MOTOR CAR-CLARK PLANT
DETROIT, MICHIGAN

FIGURE 1
FACILITY LOCATION

SOURCE: USGS, 1973, 1980

EMC ENVIRONMENTAL MANAGEMENT, INC.

2.3 WASTE GENERATING PROCESSES

Currently, the remaining electroplating operation is the primary generator of wastewater at the Clark Street facility. This wastewater is treated at the facility's wastewater treatment plant (SWMU 4) before it is discharged to the Detroit sewer system. In addition to wastewaters from electroplating operations, the treatment plant receives wastewater from other plant operations and surface runoff at the site. The treatment plant generates a sludge (F006) that is stabilized at an off-site treatment facility. GMC also generates various acid/alkali wastes (D002), spent solvents (F001), and other wastes (F008 and D007) from electroplating activities. These wastes, in addition to spent solvents (F001, F005, and D001) and thinners (D001) generated from manufacturing and painting trim components, are sealed in containers. They are stored in the current hazardous waste accumulation area (SWMU 2) before they are disposed of or recycled off site (PRC, 1991). Some plating wastes, such as empty drums, are held briefly in a satellite accumulation area (SWMU 10) before disposal.

GMC generates a lesser amount of waste from testing automobiles at its emissions and other research and performance laboratories. Specifically, these activities generate spent Stoddard solvent (D001) from carburetor testing (GMC, 1990j) and waste (scrap) gasoline (D001) removed from automobiles undergoing emission testing (GMC, 1990k). The spent Stoddard solvent and scrap gasoline were accumulated in two underground storage tanks (UST) (UST-36 [SWMU 3] and UST-77 [SWMU 9], respectively).

GMC operates an air scrubber (SWMU 11) that collects metal-bearing dust generated by grinding and buffing bumpers. The nonhazardous scrubber sludge is transferred to a dumpster box located next to the former container storage area (SWMU 1).

As part of its electroplating operations, GMC periodically generates spent nickel or copper plating and rinsate solutions. These solutions are pumped to a reclaim tank (SWMU 5) where they are temporarily stored or processed before reclamation off site. New cyanide-bearing plating solutions are poured from drums into a mixing tank associated with the plating line. After a drum is emptied into the mixing tank, GMC employees position the drum over a pit (SWMU 6) and clean the drum by rinsing it with water. The rinse water enters the pit and is conveyed to the wastewater treatment plant (SWMU 4).

GMC previously operated a paint sludge dewatering filter (SWMU 7) and an incinerator (SWMU 8) to treat wastes generated by painting processes. These units no longer exist at the facility.

Table 1 lists the SWMUs identified at the facility. Table 2 summarizes solid wastes managed at the facility during past or current operations. Figure 2 presents the GMC Cadillac Motor Car Clark Plant layout and the shows the approximate locations of the SWMUs.

2.4 RELEASE HISTORY

Several releases of hazardous constituents to the environment have been documented at this facility. These releases are associated with the former container storage area (SWMU 1) and several USTs, including UST-36 (SWMU 3) and UST-77 (SWMU 9).

GMC discovered soil contamination (volatile organic compounds [VOC] present at one foot beneath the storage pad) during closure of the the former container storage area (SWMU 1). GMC subsequently investigated the area and determined the presence of various solvents (ethyl benzene; methylene chloride; toluene; 1,1,1-trichloroethane; methyl ethyl ketone; and xylenes [all isomers]) in the soils underlying the pad (GMC, 1990a). GMC requested and received a 180-day extension of the closure period of the storage area so its personnel could assess the extent of contamination (MDNR, 1990).

In 1990, GMC submitted to MDNR a remedial action plan for the former container storage area. The remedial action plan proposed to excavate and dispose of contaminated soils under and near the former storage area. At the time of the VSI, GMC was awaiting approval of the plan (PRC, 1991).

During 1990 and 1991, GMC was replacing and upgrading UST systems at the Cadillac Motor Car Clark Street Plant to comply with state and federal regulations. While upgrading the UST systems, GMC identified and reported releases of hazardous wastes and regulated substances from several USTs, in accordance with 40 CFR Parts 265 and 280 and corresponding state requirements. GMC confirmed releases from the UST systems shown in Table 3. For each confirmed release, GMC took initial abatement actions and followed up with sampling and excavation of contaminated soils and debris. GMC took these actions before replacing or closing the affected UST system.

Table 1
Solid Waste Management Units (SWMU)

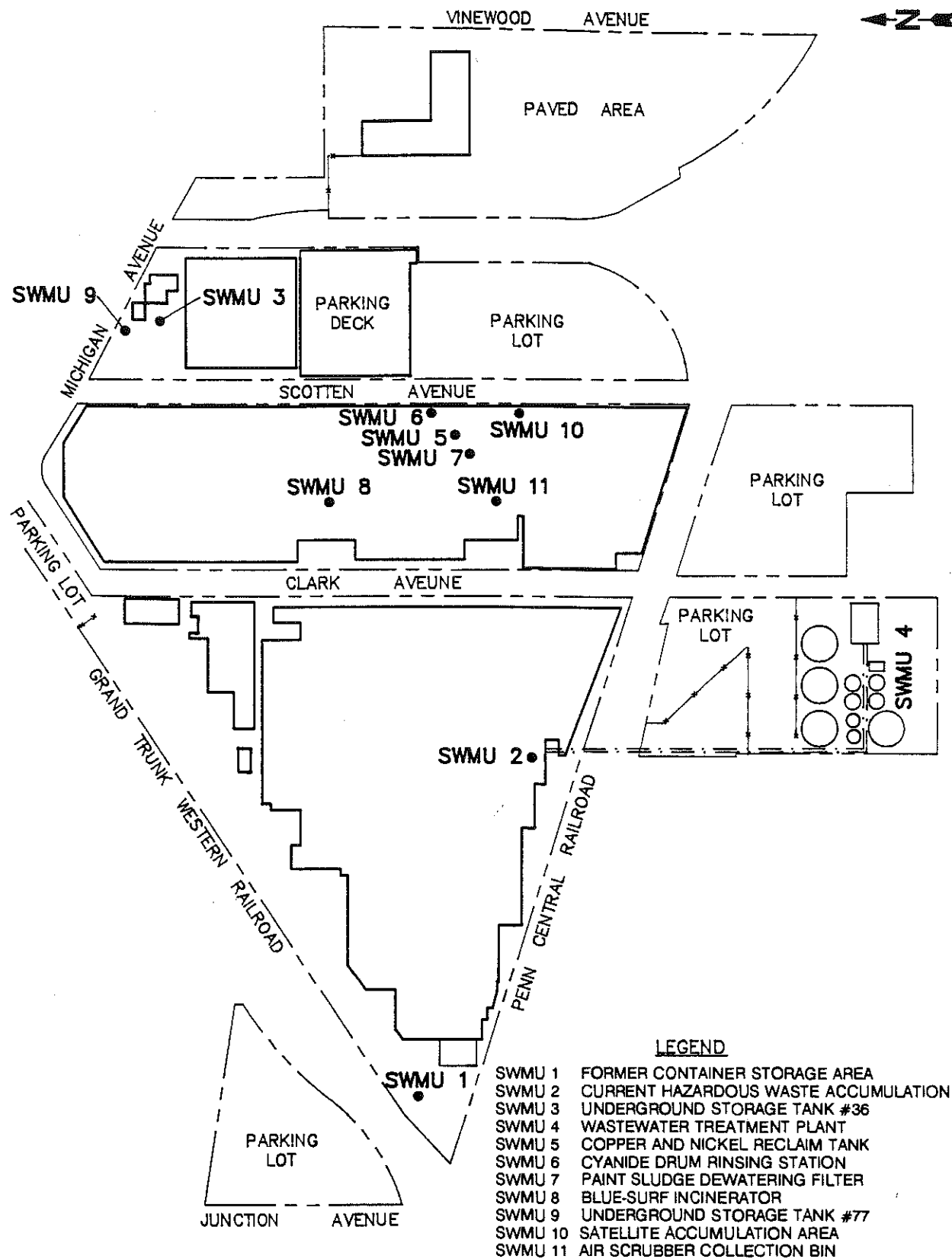
SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit¹	Status
1	Former Container Storage Area	Yes	Undergoing Closure
2	Current Hazardous Waste Accumulation Area	No	Active
3	UST-36	No	Active
4	Wastewater Treatment Plant	No	Active
5	Copper and Nickel Reclaim Tank	No	Active
6	Cyanide Drum Rinsing Station	No	Active
7	Paint Sludge Dewatering Filter	No	Inactive (removed from facility)
8	Blue-Surf Incinerator	No	Inactive (removed from facility)
9	UST-77	No	Inactive (removed from facility)
10	Satellite Accumulation Area	No	Active
11	Air Scrubber Collection Bin	No	Active

¹ A RCRA hazardous waste management unit is one that currently requires or formerly required a RCRA Part A or Part B permit.

Table 2
Solid Wastes

Waste/EPA Waste Code	Source	Primary Management Unit*
Electroplating process wastewaters	Electroplating operations	SWMU 4
Wastewater	Various plant sources (including runoff)	SWMU 4
Wastewater treatment sludge/F006	Wastewater treatment plant	SWMU 4
Cyanide-bearing rinsewaters	Electroplating operations	SWMU 6 and 4
Acid/alkali wastes/D002	Electroplating operations	SWMU 1 and 2
Spent solvents/F001	Electroplating operations	SWMU 1 and 2
Plating solutions/F008 and D007	Electroplating operations	SWMU 1, 2, and 5
Spent solvents and thinners/F001, F005, and D001	Manufacturing and painting trim	SWMU 1 and 2
Spent Stoddard solvent/D001	Carburetor testing	SWMU 3
Scrap gasoline/D001	Emissions testing	SWMU 9
Influent paint wastewaters	Paint booths	SWMU 7
Dried paint	Painting operations	SWMU 8
Empty containers that once contained plating solutions	Electroplating operations	SWMU 10
Nonhazardous air scrubber dust	Bumper buffing operations	SWMU 11

* Primary management unit refers to the SWMU which currently manages or formerly managed the waste.



GMC CADILLAC MOTOR CAR-CLARK PLANT
DETROIT, MICHIGAN

FIGURE 2
FACILITY LAYOUT

PRC ENVIRONMENTAL MANAGEMENT, INC.

GMC CAD-2.DWG - 12/27/81 - CDR

SOURCE: MODIFIED FROM GMC SKETCH, UNDATED

NOT TO SCALE

Table 3

**Confirmed Releases from Underground Storage Tank Systems
at the GMC Cadillac Motor Car Clark Street Plant**

Underground Storage Tank Systems	Substances Released	Affected Environmental Media	Corrective Actions Taken
UST-21	Gasoline	Soils	Old UST removed and destroyed; 150 yd ³ of excavated soils disposed of off site; new UST system installed.
UST-27/UST-83	Gasoline	Soils	Old UST removed and destroyed; 200 yd ³ of excavated soils disposed of off site; new UST system installed.
UST-31	Gasoline	Soils	Old UST removed and destroyed; 35 yd ³ of excavated soils disposed of offsite; new UST system installed at different location.
UST-32	Diesel fuel	Soils and pea gravel backfill material	Old UST removed and destroyed; 12 yd ³ of excavated backfill material disposed of off site.
UST-36	Spent stoddard solvent (D001)	Soils	Old UST removed and destroyed; excavated soils and backfill materials disposed of off site; new UST system installed.
UST-59	Fuel oil	Soils and ground water	Old UST removed and destroyed; excavated 280 yd ³ of soil and 1,000 gallons of water (present in excavation) and disposed of off site.
UST-77	Scrap gasoline	Soils	Old UST removed and destroyed; 84 yd ³ of excavated soils disposed of off site; backfilled with clean sand.

References: GMC, 1990b; 1990e; 1990j; 1991b; 1991c; 1991d; and 1991e.

2.5 REGULATORY HISTORY

GMC Cadillac Motor Car Clark Plant notified EPA Region 5 of hazardous waste activity and submitted a Part A permit application in 1980. GMC identified 11 operations in its interim status permit application (Part A application). GMC revised its original Part A in November 1981, requesting that EPA Region 5 exclude from interim status requirements all operations except the former container storage area (SWMU 1).

A 1982 RCRA inspection indicated that the Clark Street facility was receiving hazardous waste from off-site Cadillac plants (Conner and Livonia) (MDNR, 1982b). GMC was told to cease accepting shipments of waste from off-site locations (MDNR, 1982c). A subsequent MDNR inspection in 1986 indicated that GMC has stopped receiving wastes from off-site Cadillac facilities (MDNR, 1986).

In 1987, GMC submitted a subsequent Notification of Hazardous Waste Activity, identifying the Clark Street Plant as a large quantity generator and revising the list of hazardous wastes generated at the site (GMC, 1987). GMC initiated closure of the former container storage area (SWMU 1) in 1988. In 1989, GMC identified soil contamination at the unit during closure, and requested an extension to the closure period. MDNR granted the request in 1990 (MDNR, 1990). GMC then submitted to MDNR a remedial action plan for the former container storage area. The remedial action plan proposed to excavate and dispose of contaminated soils underneath and near the former container storage area. At the time of the VSI, GMC was awaiting approval of the plan (PRC, 1991). In addition, GMC considers the facility's present RCRA status to be that of a large quantity generator (PRC, 1991).

All wastewater discharges from the facility enter the Detroit sewer system. GMC is subject to applicable Detroit water and sewerage pretreatment standards (PRC, 1991).

The Clark Street Plant has several existing air emission sources from electroplating, wastewater treatment, and power plant operations. These emissions are subject to MDNR air quality regulations. GMC has Wayne County Air Pollution Control Department permits for these sources (PRC, 1991).

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the GMC Cadillac Motor Car Clark Street Plant.

2.6.1 Climate

The climate in Detroit and its surrounding area is characterized by evenly distributed precipitation throughout the year. The average annual precipitation is 30 to 33 inches. Average monthly temperatures range from a high of 72 degrees Fahrenheit (°F) in July to a low of 23°F in January. Weather in the vicinity is controlled by: (1) location with respect to major storm tracks, and (2) proximity to, and influence, of the Great Lakes. Typical winter storms bring periods of rain or snow. Summer storms usually pass to the north and often are associated with brief showers and sometimes thunderstorms with high winds. The Great Lakes mitigate most climatic extremes (Erickson, 1990).

Due to the topography of the area, the moist northwest air dries before it reaches the Detroit area. For example, summer showers commonly coming from the northwest often dissipate before reaching Detroit. The winter northwesterly winds bring snow to all of Michigan but rarely in accumulations of measurable depth in the Detroit area. The southeasterly winds generally contain more moisture. In any season, the area's heaviest precipitation is brought on by southeasterly winds. One-year 24-hour rainfall for the Detroit area is about 2 inches (National Oceanic and Atmospheric Administration, 1980).

2.6.2 Flood Plain and Surface Water

The nearest surface water to the facility is the Detroit River, which lies 1.4 miles southeast of the plant site (GMC, 1991d). The Clark Street Plant is not located within the Detroit River's 100-year flood plain.

2.6.3 Geology and Soils

The Detroit region lies on essentially flat, lake plain sediments formed during the early glacial stages of the Lake Erie Basin. At the Clark Street Plant, near-surface materials typically consist of fill and some sandy or silty deposits, generally less than 10 feet thick (GMC, 1991d).

Underlying the superficial sediments is a thick mantel of firm, silty clay, with occasional sand lenses and pebbles. Locally, the unit is called "blue clay" and often is 100 feet or more thick in the Detroit area. The clay has an inherently low hydraulic conductivity and forms a semipermeable barrier (aquitard) between the lower aquifer(s) and the perched aquifer at the surface (GMC, 1991d). In the Detroit area, bedrock is encountered at depths of 120 to 200 feet. The bedrock consists of 830 feet of consolidated and cemented Middle Devonian limestone from the Paleozoic era (Mozola, 1969).

2.6.4 Ground Water

The thick mantel of firm, silty clay ("blue clay") underlying the site allows two ground-water systems at the site: an unconfined (perched) system within a superficial layer and a confined system within the bedrock beneath the low-permeability silty clay (GMC, 1991d).

Specific depths to these ground-water systems have not been determined. The perched system consists of scattered amounts of ground water throughout the urban fill deposits that might collect in pockets during periods of above-average precipitation. The depth to and capacity of these perched ground-water pockets depend on the thickness of urban fill deposits overlying the blue clay layer. The bedrock aquifer usually occurs at depths of more than 100 feet.

2.7 RECEPTORS

The facility is in an mixed industrial and residential area, with residences less than 0.25 miles from the site. There are several schools and parks within a 1-mile radius of the facility. Access to the plant is controlled by 24-hour surveillance and such barriers as fences and gates.

The nearest surface water is the Detroit River, which lies 1.5 miles southeast of the site (GMC, 1991d). Detroit obtains its drinking water from three intakes along the Detroit River, at Fighting Island, Belle Isle, and a point north of Port Huron. Release of hazardous constituents directly to the River is unlikely. The entire site is covered by buildings, concrete, and asphalt. There are no natural drainage courses. A storm drain system, part of the municipal system, collects runoff from the plant site. Other runoff is collected and treated at the facility's wastewater treatment plant (SWMU 4).

Ground water is not known to be used in the vicinity of the Clark Street plant. A City of Detroit Ordinance does not permit ground water use (GMC, 1991d). Releases to the perched ground water are unlikely because of low permeable soils underlying the site and the limited amounts of ground water.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 11 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of release, and PRC's observations.

SWMU 1 Former Container Storage Area

Unit Description: GMC previously stored various containers of both hazardous and nonhazardous wastes in a paved and bermed area, 110 feet wide by 330 feet deep, next to the parking lot at the west perimeter of the facility and adjacent to the Grand Trunk Western Railroad. The former storage area consisted of three separate container management activities, as shown in Figure 3 and photographs 1 and 2 in Attachment A. GMC stored empty drums in one section of the container storage area. In another section, GMC stored miscellaneous nonhazardous wastes. The third section of the storage area was used to store RCRA hazardous wastes. The storage area was sloped toward a drain that conveyed precipitation runoff and spills to the wastewater treatment plant (SWMU 4).

Date of Startup: Unknown; estimated to be on or before 1980 (PRC, 1991).

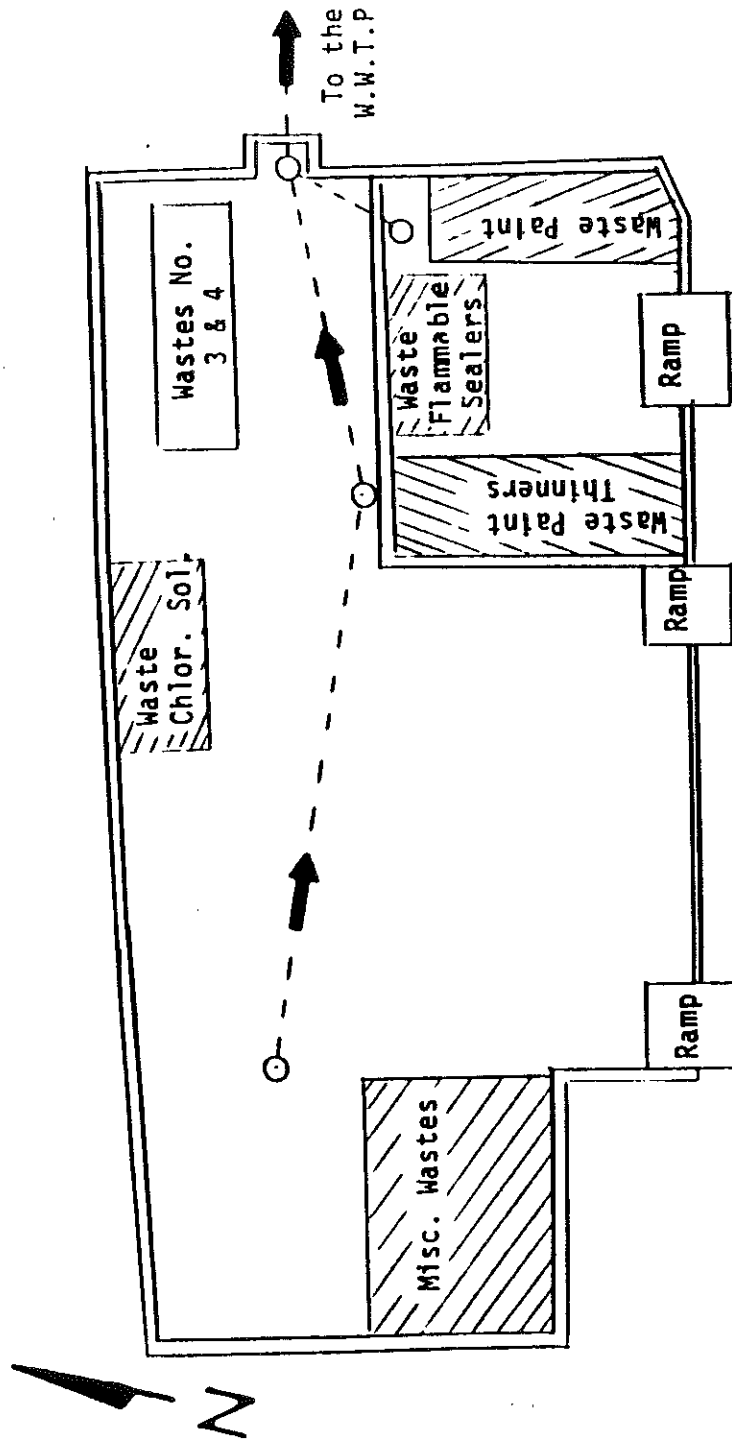
Date of Closure: GMC discontinued using the storage area in 1988. In that year, GMC submitted a closure plan to MDNR for the portion of the area dedicated to hazardous waste storage.

Wastes Managed: GMC primarily stored spent solvents (F001, F005, and D001) and paint sludges (D008) from painting operations formerly conducted at the facility in this unit. GMC also stored waste body panel sealer (D001) and corrosive wastes (D002) at the former container storage area.

Release Controls: The container storage area was paved and bermed to contain spills. The pavement was sloped to allow runoff and spills to flow to a drain connected to the wastewater treatment plant (SWMU 4).

History of Release: GMC discovered soil contamination (volatile organic compounds present at one-foot beneath the storage pad) during closure of the unit. GMC subsequently investigated the area and determined the presence of various solvents (ethyl benzene; methylene chloride; toluene; 1,1,1-trichloroethane; methyl ethyl ketone; and xylenes [all isomers]) in the soils underlying the pad (GMC, 1990a). GMC requested and received a 180-day extension of the closure period of the storage area so they could assess the extent of contamination (MDNR, 1990).

In 1990, GMC submitted a remedial action plan for the former storage area. The remedial action plan proposed to excavate and dispose of contaminated soils under and near the former storage area. At the time of the VSI, GMC was awaiting approval of the plan (PRC, 1991).



GMC CADILLAC MOTOR CAR-CLARK PLANT
DETROIT, MICHIGAN

FIGURE 3
LAYOUT OF FORMER CONTAINER STORAGE AREA

EMC ENVIRONMENTAL MANAGEMENT, INC.

SOURCE: GMC, 1985

Observations: GMC was not storing any wastes inside the storage area at the time of the VSI. The concrete berm and drains were still present. PRC noted the presence of grouted holes inside and adjacent to the container storage area; these holes resulted from closure sampling activities.

SWMU 2 Current Hazardous Waste Accumulation Area

Unit Description: GMC currently accumulates containers of hazardous wastes inside a building at the west end of the facility adjacent to the Penn Central Railroad. The storage area abuts an outside wall and consists of an asphalt floor equipped with an 8-inch berm (see photograph 3 in Attachment A). GMC places the drums on wood pallets. There are no sumps or other drains inside the bermed area. Outside the bermed area, GMC stores empty drums.

Date of Startup: June 1990.

Date of Closure: The unit is still in operation.

Wastes Managed: Spent solvents (F001, F005, and D001) and corrosive wastes (D002).

Release Controls: The storage area is paved, and equipped with an 8-inch berm; it is located inside a building.

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: No evidence of spills were observed inside or outside the accumulation area. The floor was not cracked.

SWMU 3 UST-36 (Spent Stoddard Solvent)

Unit Description: UST-36 was a single-walled, 1,500-gallon UST, located north of the Carburetor Flow Box Building (Building 43-A) and was used to collect spent Stoddard solvent from engine emission testing. GMC accumulated the waste Stoddard solvent (D001) in the tank for fewer than 90 days.

Date of Startup: Unknown; the tank was estimated to be more than 10 years old.

Date of Closure: GMC removed UST-36 and replaced it with a new tank system during December 1990 and January 1991.

Wastes Managed: Waste Stoddard solvent (D001).

Release Controls: There were no release controls associated with the old tank system.

History of Release: GMC implemented a program to upgrade UST systems at the Clark Street facility in 1990. In October 1990, GMC notified MDNR of a confirmed release from UST-36 during removal and replacement of the tank system (GMC, 1990j). Visibly stained and odorous soil was noted in the area surrounding the tank's dipstick and fill riser. Because GMC had conducted

a tightness test on UST-36 in December 1989 and found the tank to be tight, they suspected that the source of the release was past overflows at the dipstick and fill riser associated with manual filling of the tank. GMC estimated that approximately 3 to 5 gallons of Stoddard solvent had been released (GMC, 1990h).

GMC excavated the contaminated soil and disposed of it off site. The tank was removed and replaced with a new tank system having secondary containment during December 1990 and January 1991 (PRC, 1991).

Observations: The area from which UST-36 was removed has been repaved with asphalt (see photograph 4 in Attachment A).

SWMU 4

Wastewater Treatment Plant

Unit Description: The wastewater treatment plant is located west of Clark Street at the southern property boundary of the facility (see photographs 5, 6, and 7 in Attachment A). The plant currently treats all industrial wastewater and surface runoff generated at the facility before it is discharged to the Detroit sewer system. The plant has one treatment system capable of treating general and oily wastewaters generated throughout the facility. GMC also modified the plant specifically to treat acid/alkali and cyanide-bearing wastewaters generated by the facility's electroplating operations. The equipment and unit operations that make up the treatment plant are shown in Tables 4 and 5. Process flow diagrams detailing the treatment process are shown in Figures 4, 5, and 6. The plant generates a listed wastewater treatment sludge (F006) that is disposed of at an off-site landfill. The plant also reclaims waste oil from oily wastewaters. The reclaimed waste oil is sold to an off site reclamation facility.

Date of Startup: Some sections of the plant were constructed in 1970. The general and oily wastewater treatment system was completed and began operating in 1974. GMC completed construction of the electroplating wastewater treatment process portion of the plant in 1980; it began operating in 1981.

Date of Closure: The plant is still in operation.

Wastes Managed: This unit manages wastewaters and surface runoff generated throughout the facility. The plant generates a treatment sludge (F006) that is managed in gondolas before being sent to an off-site treatment facility (Envirite) in Canton, Ohio (Reisinger, 1992).

Table 4

**Wastewater Treatment Plant Process Equipment
General and Oily Wastewater Treatment**

**DESIGN CAPACITY - 2000 GPM
STORAGE FACILITIES:**

Three 1,000,000 Gal. General Waste Tanks
Three 250,000 Gal. Oily Waste Tanks
250,000 Gal. Sludge Holding Tank

PROCESS CAPABILITIES:

Four Process Pumps Rated at 1200 GPM
Four Process Mix tanks 8000 Gal. Each
Five Dissolved Air Flotation Units, 30,000 Gal., 10' x 45' Area, Rated at 500 Gal. Each
13,000 Gal. pH Adjustment Tank
1,000,000 Gal. Clarifier, Also Available for Electroplating Operations
Five 6,000 Gal. Scum Storage Tanks
Four 3,000 Gal. Scum Cookers
13,000 Gal. Skim Oil Tank
Two 10,000 Gal. Reclaimed Oil Storage Tanks
Two 200 Gal. Filter Aid Tanks

CHEMICAL STORAGE:

6,000 Gal. Sulfuric Acid Tank
8,000 Gal. Caustic Storage Tank
8,000 Gal. Alum Storage Tank
8,000 Gal. Reclaimed Alum Storage Tank

PROCESS CONTROL:

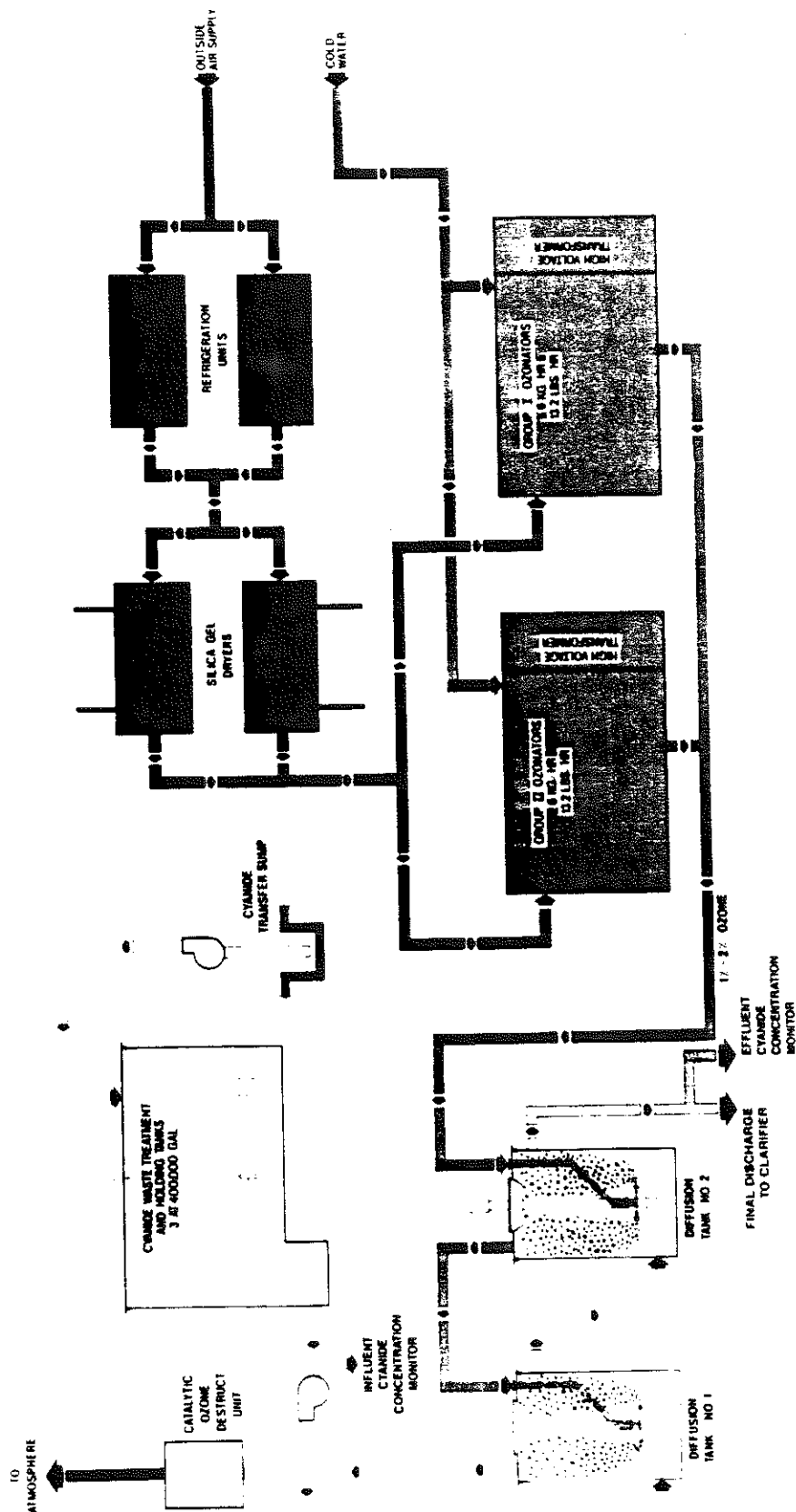
Analog-Using Foxboro Instrumentation and Measuring Equipment

Table 5

**Wastewater Treatment Plant Process Equipment
Electroplating Wastewater Treatment**

Acid/Alkali System	
Design Capacity: 2000 GPM on a batch or continuous basis	
Storage and process tanks	Two 500,000 gal. treatment tanks 1,000,000 gal. treatment and holding tank 100,000 gal. blend tank 1,000,000 gal. clarifier, also available for the general and oily waste system
Chemical tanks	5,000 gal. reclaim acid tank 500 gal. acid day tank, also used for the general and oily waste system 10,000 gal. caustic storage tank 200 gal. coagulant aid tank 300 gal. precipitant aid tank Three 2000 lb. sulfur dioxide tanks
Process control	Digital with analog backup through a Foxboro 2/30 computer and instrumentation panel Technicon IV on-line continuous analyzers for chrome detection
Cyanide Treatment System	
Design Capacity Flow Rate: 375 GPM	
Maximum Ozone Production: 12.0 Kg/hr (26.4 lbs/hr)	
Storage tanks	Three 400,000 gal. holding tanks
Process system	Two 1,000 GPM transfer pumps Two 400 GPM treated waste transfer pumps 100,000 gal. blend tank, also used for the acid/alkali system 1,000,000 gal. clarifier available for all treatment systems
Ozone production system	Total ozone capacity: 12 Kg/hr (26.4 lbs/hr) Number of electrodes: 7740 Gas flow min.: 59 CFM Gas flow max.: 382 CFM Ozone concentration: 1.5-2.0% by weight Operating voltage: 460 volts Primary current: max. 105 amps per ozonator Secondary voltage: 7,500 volts
Ozone injection system	Two Turbine diffusers, 1,750 RPM, 1,650 gal. holding capacity
Air preparation	Two 382 CFM preblowers Two Refrigeration units, -40° dew point Two 2-cell silica gel dryers with 2,645 lbs. of silica gel each and automatic regeneration cycle
Excess ozone elimination	140° - 158° (6 x 3 KW) 143 lbs. of catalyst (model COO/37) mist eliminator

References: GMC Data Sheet, Industrial Wastewater Treatment Plant, Cadillac Motor Car Division (undated).

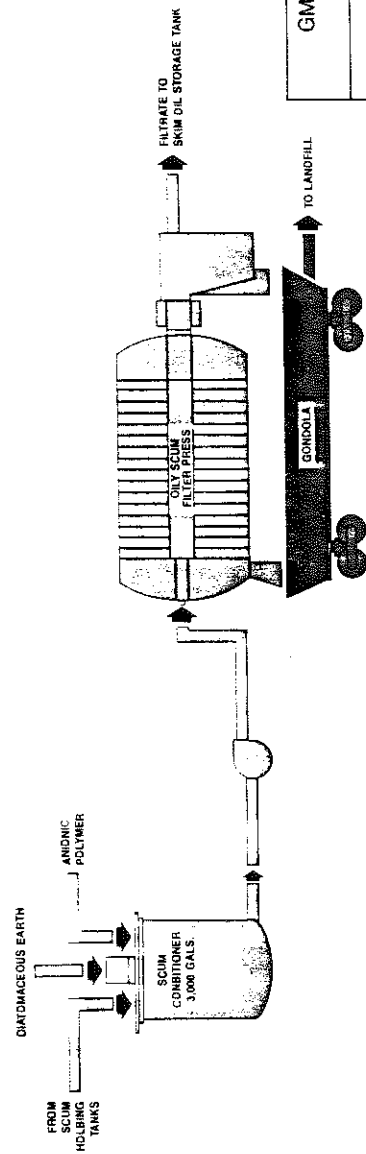
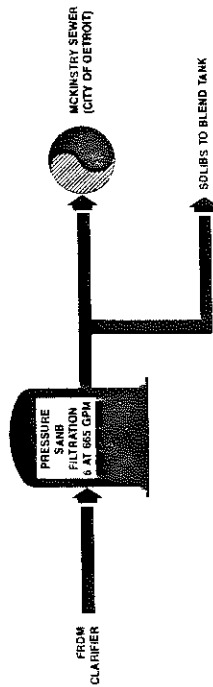
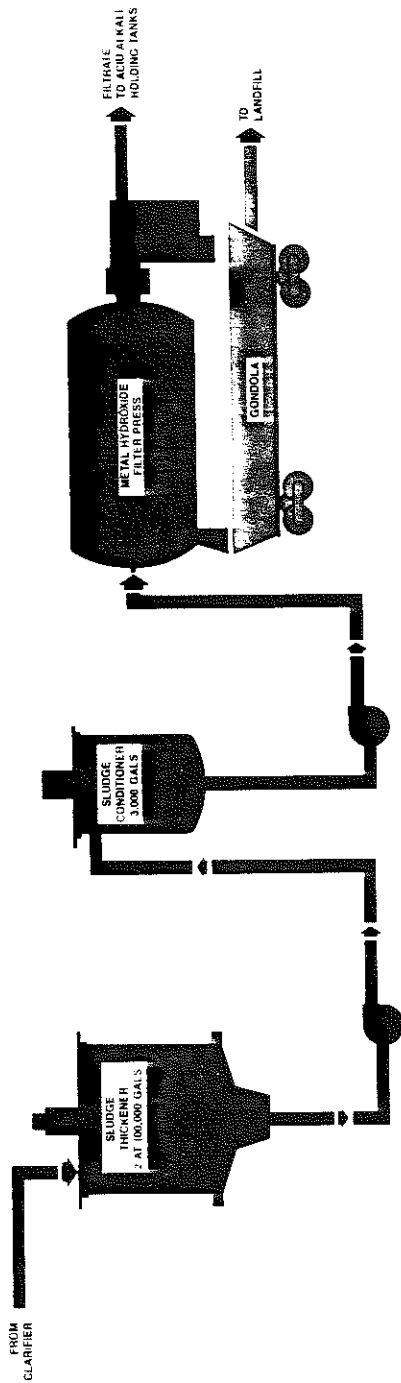


GMC CADILLAC MOTOR CAR-CLARK PLANT
DETROIT, MICHIGAN

FIGURE 5
CYANIDE WASTEWATER TREATMENT PROCESS

EMC ENVIRONMENTAL MANAGEMENT, INC.

SOURCE: GMC DATA SHEETS, UNDATED



GMC CADILLAC MOTOR CAR-CLARK PLANT
DETROIT, MICHIGAN

FIGURE 6
FILTRATION WASTEWATER TREATMENT PROCESS

SOURCE: GMC DATA SHEETS, UNDATED

EMC ENVIRONMENTAL MANAGEMENT, INC.

Release Controls: Various mixing tanks and other unit operations of this SWMU are located inside a treatment plant building that has floor drains and sumps to contain spills. Cyanide-bearing wastewaters are managed in sealed tanks; this practice limits air emissions. There is no secondary containment surrounding the outdoor tanks.

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: All tanks observed during the VSI were in good condition, without any corrosion or cracks. No spills were observed near any of the tanks or other unit operations.

SWMU 5 Copper and Nickel Reclaim Tank

Unit Description: The unit consists of an open-top, below-grade steel tank located inside the building that houses the bumper plating processes (see photograph 8 in Attachment A). GMC uses this tank to facilitate the reclamation of nickel and copper plating solutions. According to GMC, copper reclamation, which occurs infrequently, involves filling the tank with a plating bath containing excess copper. While in the tank, copper is plated out of the solution and pumped to a tanker truck for reclamation off site. The remaining solution is pumped from the tank to the wastewater treatment plant (SWMU 4). GMC also diverts to the tank rinse water (from the nickel plating line) containing concentrated levels of nickel. The rinse water remains in the tank until it is pumped to a tanker truck and sent off site for reclamation or use as a raw material. GMC stated that it ships the rinse water containing nickel off site approximately 4 times a year (PRC, 1991).

Date of Startup: Unknown; the estimated age of the tank is at least 20 years (PRC, 1991).

Date of Closure: The unit is still in operation.

Wastes Managed: The unit manages copper-containing plating baths and nickel-containing rinsewaters.

Release Controls: The tank is located inside a building that has paved floors. A hood hangs above the tank to capture any mist generated during its operation. The area under and surrounding the tank has interceptor floor drains that drain to the wastewater treatment plant (SWMU 4).

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: The tank was not in use during the VSI, but appeared to be sound.

SWMU 6 Cyanide Drum Rinsing Station

Unit Description: This unit consists of a below-grade concrete pit adjacent to a bumper plating line (see photograph 9 in Attachment A). A metal grate covers the pit and an adjacent below-grade mixing tank associated with the plating line. New cyanide-bearing plating solutions are poured from drums into a

mixing tank associated with the plating line. After a drum is emptied into the mixing tank, GMC employees position the drum over the pit and clean the drum by rinsing it with water. The rinse water enters the pit and is conveyed to the wastewater treatment plant (SWMU 4).

Date of Startup: Unknown; the unit is estimated to be at least 20 years old (PRC, 1991).

Date of Closure: The unit is still in operation.

Wastes Managed: The unit manages cyanide-bearing rinsewater.

Release Controls: The pit is made of concrete and is located inside a building. The entire area where drums are rinsed drains to the wastewater treatment plant (SWMU 4).

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: Observation inside the pit was not possible.

SWMU 7 Paint Sludge Dewatering Filter

Unit Description: This unit consisted of a vacuum filter attached to the painting equipment (paint booths) and was used to generate sludge from influent paint wastewaters. The vacuum filter and painting equipment were located inside the building that also housed the plating operations.

Date of Startup: Unknown.

Date of Closure: The vacuum filter was dismantled and removed in 1988, when GMC ended painting operations at the facility.

Wastes Managed: The unit managed wastewaters from painting operations.

Release Controls: The unit was located inside a building.

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: The unit no longer exists at the facility. The area where the unit had been located was paved and free from cracks or joints. All floor drains and sumps lead to the wastewater treatment plant (SWMU 4).

SWMU 8 Blue-Surf Incinerator

Unit Description: This unit was an incinerator that burned dried paint off fixtures (for example, cages or baskets) that held parts while they were being painted. Paint accumulated on the fixtures over time and was removed because GMC reused the fixtures.

Date of Startup: Unknown; estimated as 1980 (PRC, 1991).

Date of Closure: GMC dismantled and removed the incinerator in 1988 (PRC, 1991).

Wastes Managed: The unit managed dried paint that accumulated on fixtures (baskets or cages) used in painting operations.

Release Controls: The incinerator was located inside a building on an upper floor.

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: The unit no longer exists at the facility. The general area where the incinerator had been located was empty except for some miscellaneous automobile parts and other items.

SWMU 9 UST-77 (Scrap Gasoline Tank)

Unit Description: UST-77 was a 550-gallon underground steel tank used to store waste (scrap) gasoline pumped from the gas tanks of test vehicles.

Date of Startup: Unknown; the tank was estimated to be more than 10 years old.

Date of Closure: December 1990 through January 1991

Wastes Managed: The unit managed waste (scrap) gasoline (D001) removed from the gas tanks of test vehicles.

Release Controls: None

History of Release: Before the tank's removal, GMC suspected a release from the ancillary piping associated with the tank. Upon further soil sampling near the tank, GMC confirmed a release (benzene) to the soils (GMC, 1990i). GMC removed the UST and scrapped it at an off-site facility. GMC also removed 84 cubic yards of contaminated soils and disposed of the soils at an off-site landfill. The excavated area was backfilled with clean sand and the concrete and asphalt cover replaced (GMC, 1991b).

Observations: The area from which UST-77 was removed had been repaved with asphalt (see photograph 10 in Attachment A).

SWMU 10 Satellite Accumulation Area

Unit Description: There is a satellite accumulation area inside the building that houses the electroplating processes. There were several empty containers that once held plating solutions in the area.

Date of Startup: Unknown.

Date of Closure: The unit is still in operation.

Wastes Managed: There were empty containers that had once held plating solutions in the area.

Release Controls: The unit is located inside the building that houses the bumper plating operations. All building drains and sumps connect to the wastewater treatment plant (SWMU 4).

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: No spills were noted in the area. No cracks or fractures were observed in the floor near the unit.

SWMU 11 Air Scrubber Collection Bin and Dumpster Boxes

Unit Description: The unit consists of a portable metal bin associated with an air scrubber (see photograph 11 in Attachment A) and dumpster boxes located outside the building. The bin and scrubber are located inside the building that houses the bumper plating operations. The scrubber collects dust (mostly fine metal particles) generated during the buffing and grinding of bumpers. The scrubber deposits the dust in the metal bin. The scrubber dust (or sludge) is transferred to covered dumpster boxes adjacent to the former container storage area. The dumpster boxes are situated on a asphalt parking lot.

Date of Startup: Unknown.

Date of Closure: The unit is still in operation.

Wastes Managed: The unit manages nonhazardous air scrubber sludge.

Release Controls: The scrubber and associated collection bins are inside the building that houses the bumper operation. All building drains and sumps connect to the wastewater treatment plant (SWMU 4). The dumpster boxes are covered as shown in Photograph 12 in Attachment A.

History of Release: No releases from this unit were identified during the PA/VSI.

Observations: The scrubber and collection bin appeared to be in good condition. No spills of the scrubber sludge were present around the collection bin. No cracks or fractures were observed in the floor near the unit. The dumpster boxes holding air scrubber dust were covered and appeared to be in good condition. No dust spills were observed near the boxes.

4.0 AREAS OF CONCERN

PRC did not identify any AOCs during the PA/VSI.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified 11 SWMUs at the GMC Cadillac Clark Street facility; no AOCs were identified. Background information on the facility's location, operations, waste generating processes, release history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, release history, and observed condition, is discussed in Section 3.0. Following are PRC's conclusions and recommendations for each SWMU. Table 6 identifies the SWMUs at the GMC Cadillac Clark Street facility and suggested further actions.

SWMU 1 Former Container Storage Area

Conclusions: The former container storage area has released hazardous constituents into the on-site soils. GMC discovered soil contamination (volatile organic compounds (VOCs) present at one foot beneath the storage pad) during closure of the unit. GMC subsequently investigated the area and determined the presence of various solvents (ethyl benzene; methylene chloride; toluene; 1,1,1-trichloroethane; methyl ethyl ketone; and xylenes [all isomers]) in the soils under the pad (GMC, 1990a).

In 1990, GMC submitted to MDNR a remedial action plan for the former storage area. The remedial action plan proposes to excavate and dispose of contaminated soils under and near the former storage area. At the time of the VSI, GMC was awaiting approval of the plan (PRC, 1991).

The potential for the release of hazardous constituents to the air and surface water is low based on the presence of asphalt and concrete pavement above the contaminated soils and low permeability soils under the pavement. The potential for the release of hazardous constituents to perched ground water under the pad is low to moderate depending on height of the perched water table in the former container storage area. The threat of contamination of perched ground water to affect environmental receptors is minimal. The perched ground-water system consists of limited amounts of water and is not used as a public water source.

Recommendations: PRC recommends the excavation and removal of contaminated soils associated with the former container storage area, as described in GMC's remedial action plan once the plan is approved by MDNR.

SWMU 2 Current Hazardous Waste Accumulation Area

Conclusions: GMC Cadillac's new container storage area has adequate containment (the unit is inside a building) to prevent migration of hazardous constituents into the environment. No past releases or waste management activity have been documented for this area. Therefore, the potential for the release of hazardous constituents to soils, surface water, ground water, or air is low.

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Table 6
SWMU Summary

	SWMU	Operational Dates	Evidence of Release	Suggested Further Action
1.	Former Container Storage Area	Unknown - 1988	VOCs in soils under pad	Excavation and removal of contaminated soils
2.	Current Hazardous Waste Accumulation Area	June 1990 - present	None	None
3.	UST-36	Original UST replaced in 1990	Visibly stained and odorous soils noted during tank replacement (these soils were removed)	None
4.	Wastewater Treatment Plant	1970 - present	None	None
5.	Copper and Nickel Reclaim Tank	Unknown - present	None	None
6.	Cyanide Drum Rinsing Station	Unknown - present	None	None
7.	Plant Sludge Dewatering Filter	Unknown - 1988	None	None
8.	Blue-Surf Incinerator	Unknown - 1988	None	None
9.	UST-77	Unknown - 1990	Benzene contaminated soils (these soils were removed)	None
10.	Satellite Accumulation Area	Unknown - present	None	None
11.	Air Scrubber Collection Bin	Unknown - present	None	None

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Recommendations: PRC recommends no further action at this time.

SWMU 3 UST-36 (Spent Stoddard Solvent)

Conclusions: The previous underground storage tank at this location released hazardous constituents into the environment. GMC notified MDNR in October 1990 of a confirmed release from the UST-36 during removal and replacement of the tank system (GMC, 1990j). Visibly stained and odorous soil was noted in the area surrounding the dipstick and fill riser. Because GMC had conducted a tightness test on UST-36 in December 1989 and found the tank to be tight, GMC personnel suspected that the source of the release was past overflows at the dipstick and fill riser associated with the manual filling of the tank. GMC estimated that approximately 3 to 5 gallons of Stoddard solvent had been released (GMC, 1990h).

GMC excavated the contaminated soil and disposed of it off site. The tank was removed and replaced with a new tank system during December 1990 and January 1991 (PRC, 1991). The new tank system meets RCRA Part 265 Subpart J requirements for secondary containment.

Recommendations: PRC recommends no further action at this time.

SWMU 4 Wastewater Treatment Plant

Conclusions: Portions of the treatment plant have secondary containment, while others do not. Various mixing tanks and other unit operations (for example, dissolved-air flotation units, filter presses, and other equipment) are located inside a treatment plant building that has floor drains and sumps to contain spills. Cyanide-bearing wastewaters are managed in sealed tanks; this practice limits air emissions. Large tanks (with capacities of up to 1,000,000 gallons) outside the treatment plant building do not have secondary containment. All tanks, unit operations, and associated equipment appeared to be in good condition during the VSI (that is, units did not have any noticeable cracks, repairs, rust, or other visible evidence of damage or poor maintenance that might indicate or allow a release). No releases have been documented for the treatment plant area. No spills or leaks from any of the tanks or unit operations at the plant were noted. The potential for the release of hazardous constituents from the treatment plant to soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

SWMU 5 Copper and Nickel Reclaim Tank

Conclusions: No releases have been documented for this unit. No evidence of spills in the area was noted during the VSI. The tank is inside a building that has paved floors. A hood hangs above the tank to capture any mist generated during its operation. The area under and surrounding the tank has interceptor floor drains that drain to the wastewater treatment plant

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(SWMU 4). The potential for the release of hazardous constituents from the copper and nickel reclaim tank to soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

SWMU 6 Cyanide Drum Rinsing Station

Conclusions: No releases have been documented for this unit. No evidence of spills in the area was noted during the VSI. Drums are rinsed over a pit that is made of concrete and located inside a building. The entire area where drums are rinsed drains to the wastewater treatment plant (SWMU 4). The potential for the release of hazardous constituents from the cyanide drum rinsing station to soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

SWMU 7 Paint Sludge Dewatering Filter

Conclusions: The sludge dewatering filter no longer exists at the facility. No releases have been documented for this unit. No evidence of any releases from the unit was identified during the VSI. The unit formerly was located inside the bumper plating building, and so had secondary containment in case of any releases. The potential for the release of hazardous constituents from the former sludge dewatering filter area to soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

SWMU 8 Blue-Surf Incinerator

Conclusions: The Blue-Surf incinerator no longer exists at the facility. No releases have been documented for this unit. No evidence of any releases from the unit was identified during the VSI. The potential for the release of hazardous constituents from the former incinerator area to soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

SWMU 9 UST-77 (Scrap Gasoline Tank)

Conclusions: The former underground storage tank released hazardous constituents into the environment. Before the tank's removal, GMC suspected a release from the ancillary piping associated with the tank. Upon further soil sampling near the tank, GMC confirmed a release (benzene) to the soils (GMC, 1990i). GMC removed the UST and scrapped it at an off-site facility. GMC also removed 84 cubic yards of contaminated soils and disposed of the soils at an off-site landfill. The excavated area was backfilled with clean sand and the concrete and asphalt cover replaced (GMC, 1991b). The UST never was replaced. The potential for the release of hazardous

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constituents from the former UST-77 area to soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

SWMU 10 Satellite Accumulation Area

Conclusions: No releases have been documented for this unit. No evidence of spills in the area was noted during the VSI. The unit is inside the building that houses the bumper plating operations. All building drains and sumps connect to the wastewater treatment plant (SWMU 4). The potential for the release of hazardous constituents from the satellite accumulation area to soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

SWMU 11 Air Scrubber Collection Bin and Dumpster Boxes

Conclusions: No releases have been documented for this unit. No evidence of spills in the area surrounding the collection bin was noted during the VSI. The scrubber and associated collection bins are inside the building that houses the bumper operation. All building drains and sumps connect to the wastewater treatment plant (SWMU 4). The potential for the release of hazardous constituents from the air scrubber collection bin to soils, surface water, ground water, or air is low.

No releases from the dumpster boxes were identified during the VSI. The dumpster boxes were covered adequately to prevent wind dispersion of the scrubber dust. The potential for the release of hazardous constituents from the dumpster boxes into soils, surface water, ground water, or air is low.

Recommendations: PRC recommends no further action at this time.

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- GMC, 1990j, Letter to MDNR regarding release of hazardous material (October 19).
- GMC, 1990k, Letter to MDNR regarding 45-day report on release from UST-77 (November 9).
- GMC, 1991a, Letter to MDNR regarding confirmation of release from UST-21 (June 26).
- GMC, 1991b, Letter to MDNR regarding followup to 45-day report on removal of UST-77 (July 2).
- GMC, 1991c, Letter to MDNR regarding 45-day site characterization report for removal of UST-27 and UST-83 (July 5).

GMC, 1991d, Letter to MDNR regarding 45-day site characterization report for UST-21 (July 19).

GMC, 1991e, Letter to MDNR regarding report for removal of UST-31 (July 23).

GMC Data Sheet, Industrial Wastewater Treatment Plant, Cadillac Motor Car Division (undated).

Michigan Department of Natural Resources (MDNR), 1982a, RCRA Inspection Report on GMC Cadillac Motor Car Clark regarding inspection on February 24.

MDNR, 1982b, RCRA Inspection Report on GMC Cadillac Motor Car Plant regarding inspections on December 3 and 6.

MDNR, 1982c, Letter to GMC Cadillac Motor Car Clark Plant (December 13).

MDNR, 1986, RCRA Inspection Report on GMC Cadillac Motor Car Clark Plant regarding inspection on March 4.

MDNR, 1989, Internal staff report (December 19).

MDNR, 1990, Letter to GMC Cadillac Motor Car Clark Plant concerning extension of closure period for container storage area (April 11).

Mozola, A.J., 1969, Geology for Land and Ground Water Development in Wayne County, Michigan. State of Michigan Department of Natural Resources, Report of Investigation 3.

National Oceanic and Atmospheric Administration, 1980, Environmental Data Information Service, Narrative Climatological Summary, Detroit Metropolitan Airport, Michigan.

PRC Environmental Management, Inc. (PRC), 1991, PRC preliminary assessment/visual site inspection (PA/VSI) on November 15.

Reisinger, Bridget, 1992, Senior Environmental Engineer, GMC Cadillac Motor Car Division, personal communication with Dave Phillips, PRC Environmental Management, Inc. (January 28).

ATTACHMENT A
VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

**GMC CADILLAC MOTOR CAR CLARK PLANT
DETROIT, MICHIGAN
MID 005 356 704**

Date: November 15, 1991

Facility Representatives: Bridget Reisinger, Senior Environmental Engineer, GMC Cadillac Motor Car Division (313) 554-6597
Ed Jenkins, General Supervisor, Wastewater Treatment, GMC Cadillac Motor Car Division (313) 554-5716
Timothy A. Core, Environmental Engineer, GMC Cadillac Motor Car Division (313) 554-6599
Fred W. Rindhage, P.E., Senior Staff Engineer, Buick Oldsmobile Cadillac Group (313) 947-9240

Inspection Team: Dave Phillips, PRC Environmental Management, Inc. (703) 883-8886
Sherry Gernhofer, PRC Environmental Management, Inc. (703) 883-8888

Photographer: Sherry Gernhofer

Weather Conditions: Overcast, 50°F

Summary of Activities: The visual site inspection began at 9:20 a.m. at the GMC Cadillac Motor Car Clark Street plant. PRC's inspection team was joined by Bridget Reisinger, Ed Jenkins, Timothy A. Core, and Fred W. Rindhage of GMC for a briefing on the inspection. Dave Phillips reviewed the purpose of the site visit with GMC. GMC reviewed the history of the facility, and described current production operations and waste management practices.

The site tour commenced at 10:40 a.m. Safety glasses were required for entering production areas of the facility. Photographs were taken of the facility's solid waste management units. The tour was completed at 12:15 p.m.

PRC inspectors held a brief exit interview with the GMC representatives and left the facility at 12:30 p.m.



Photograph No.	1	Location:	SWMU 1
Orientation:	West	Date:	11/15/91
Description:	Former container storage area; patched holes inside bermed area resulted from sample borings		



Photograph No.	2	Location:	SWMU 1
Orientation:	North	Date:	11/15/91
Description:	View of former container storage area		



Photograph No. 3
Orientation: South
Description: View of current hazardous waste accumulation area

Location: SWMU 2
Date: 11/15/91



Photograph No. 4
Orientation: Unknown
Description: Location of UST-36 that was replaced in 1990

Location: SWMU 3
Date: 11/15/91



Photograph No.	5	Location:	SWMU 4
Orientation:	Unknown	Date:	11/15/91
Description:	Gondola car containing dewatered treatment sludge; gondola car is located under filter press		



Photograph No. 6 West
Orientation: West
Description: View of wastewater treatment plant; overhead piping (to the right) conveys wastewater from facility operations.



Photograph No. 7
 Orientation: Northwest
 Description: View of wastewater treatment plant

Location: SWMU 4
 Date: 11/15/91



Photograph No.	8	Location:	SWMU 5
Orientation:	Unknown	Date:	11/15/91
Description:	Top of copper and nickel reclaim tank inside building that houses plating operations		



Photograph No.	9	Location:	SWMU 6
Orientation:	Unknown	Date:	11/15/91
Description:	Top of concrete pit where GMC employees rinse drums containing cyanide-bearing plating solutions		



Photograph No. 10 **Location:** SWMU 9
Orientation: Unknown **Date:** 11/15/91
Description: Former location of UST-77; area was repaved after the tank was removed in 1991.



Photograph No. 11 **Location:** SWMU 11
Orientation: Unknown **Date:** 11/15/91
Description: View of air scrubber and collection bin containing dust generated from grinding and buffing bumpers



Photograph No. 12
Orientation: North
Description: Dumpster boxes containing air scrubber dusts generated by bumper grinding and buffing operations
Location: SWMU 1
Date: 11/15/91

ATTACHMENT B
VISUAL SITE INSPECTION FIELD NOTES

(96)

11-15-91

DSP

50°F - Overcast; Arrived at GMC-9:05 AM
Conducted the briefing at 9:20 AM
Introduced ourselves and began
discussion of facility operations

Facility Operations:

Initial GMC operations began

1920 - Oldest building newest
was constructed in 1960
Home-site for building Cadillac
(the entire area)

Machining operations moved in late 1970s
Full-time assembly ceased in 1987

Current Operations

- Bumper Plating
 - Fabricating of outer trim.
- Still Administrative HQ's for
Cadillac - some engineering
is done at site

Plating operations will cease
in April, 1992

(97)

11-15-91

DS

Facility will remain as a com-
bination engineering and adminis-
tration center.

Waste Management

Engine foundry at the plant
until the 1950's - Former production
included:
Machining; Stamping Assembly
of small parts; components
- painting wastes from paint
operations primary waste.

- plating wastes
Acid, Alkaloids; Cyanide
wastes

Line H_2O_2 are treated at the
on-site W.W.T.U. plant that
generates F006

DS

(98.)

11-15-91

JD

Container Storage Area

1980+ (pre-Relat start-up)

Closure plan submitted in

1988-89 - Remedial Action

Plan submitted in 1990

GMC prepared to remove a

certain amount of soil from
the area.

Paint solvents managed here

- some contamination because

GMC is submitting a remedial

action plan for the closure of

the unit.

c

VST 36

New tank has preplaced the
tank - new tank is same size
and used for the same purpose

11-15-91

JD

(99.)

Spent stockpiled

(ie. storage of scrap fuel)

Installed Jan, 1991.

JD

Waste H₂O Treatment Plant

System treats surface runoff from

the plant. Future of system

is not quite decided at this

time - after the plating operations

clear.

DDZ

Plating Reclaim Units

Copper, Nickel, and Cyanide

plating processes at the facility.

DDZ

Paint Sludge DeH₂O Filter

Removed 1788 associated with

the booth H₂Oing system. Unknown

Start-up date. Sludge generated

was probably non-hazardous

(100.)

11-15-91

DF

Blue Surf Incinerator

System shut-down and removed in 1988. Possibly began operation in the 1980. Incinerator dismantled and removed in 1988.

DF

VST-77

Same conditions apply to this tank as in VST-36. However VST 77 was never replaced.

Environmental Permits

- Large Quantity Generator became of F006:
- All waste H₂O's discharged through c Detritus Sewerage system under pretreatment permit
- No or very limited PCB storage (possibly light-balloons)

gff

11-15-91

DF

(101.)

Air permits

Several for plating operation and wastewater treatment operations

DF

Plating Baths

Spent baths may be sold or reused when facility discontinues plating operations in April.

Spent Anodes are generated.

Approximately 3000 employees at this facility

Completed pre-briefing at 10:30AM

Began tour of facility at 10:40AM

DF

(102)

11-15-91 DE

Container Storage Area (Former)

Asphalt & concrete paved area w/ slope to dump that leads to the W.W.T.U. - surrounded w/ 8in berm

- Dumpsters contain air pollution scrubber sludge from plating operations (scrubber sludge is non-hazardous)

New Container Storage Area

Began using this area in June 1990

Asphalt paved - 6-8 inch berms

No sump 3 - located inside

building. - Empty drum storage

ready - adjacent to current container storage area.

DE

11-15-91

DE

(103)

Waste H₂O Treatment Plant

Complete turn of waste H₂O treatment facility. Originally built in 1970. Waste oil is reclaimed and sold to off-site users.

VST 36 and V77 Locations

Took pictures of VST locations. VST-77 was removed and not replaced.

Former location of Blue-Sing Incinerator

Area is barren w/ the exception of some storage of parts & equipment.

Air Scrubber - Collection Bin

Collects dust from buffing operation associated w/ plating barrels.

DE

(104)

11/15/91

JP

Copper Reclaim Tank

Still in operation.

Dilute build up of copper in bath
put out copper in solution
solution went to acid-alkali WWI.
copper concentrate, the copper pump
to a tanker truck

Nickel Plating Line (used same tank as Rea tank)

Rinse tank (lost in line)
build up would be detected.

Used as a holding tank and sent
off-site and reclaimed or used
as an ingredient by them off-site
facilities - Occur about 4X a year

Cu⁰ plating area

after greater solids Cu⁰ to bath.
cleans out the drums (containing

Cu⁰) over grating - eventually
flows to waste.

Mix tank of pean underneath the
grating. Unable to observe any
cracks of deficiencies in the tank.

11/15/91 PR- (105)

Unknown start date for

Cu & Ni reclaim tank
(earlier date 1950's, 1960's)

Satellite Accumulation Area

Clear filter -

Empty drums are present in
the satellite accumulation

Drums result from the
addition of products at the
plating line

Tour concluded at 12:15 PM

Debriefing immediately followed

Left facility at 12:30 PM

BRIDGET REISINGER

121



BRIDGET REISINGER

SENIOR ENVIRONMENTAL ENGINEER
CADILLAC MOTOR CAR DIVISION
GENERAL MOTORS CORPORATION

2880 CLARK STREET
DETROIT, MI 48232
313 554-6597
GM 8 284-6597

FAX 313 554-6464



TIMOTHY A. CORE

ENVIRONMENTAL ENGINEER
CADILLAC MOTOR CAR DIVISION
GENERAL MOTORS CORPORATION

2880 CLARK STREET
DETROIT, MI 48232
313 554-6599
GM 8 284-6599



ED JENKINS

GENERAL SUPERVISOR
WASTEWATER TREATMENT
CADILLAC MOTOR CAR DIVISION
GENERAL MOTORS CORPORATION

2880 CLARK STREET
DETROIT, MI 48232
313 554-3716
GM 8 284-5716

122 11-15-91

smg

CADILLAC MOTORS

MAIN PLANT

DETROIT, MI

CADILLAC REPRESENTATIVES:

Bridget Reisinger

Fred Rindlage

Timothy Cove

Ed Jenkins

PRE ENVIRONMENTAL MGMT

REPRESENTATIVES:

Dave Phillips

Sherry Gemhofer

Partly cloudy skies, low 40°Fs

Part Operations

Oldest Bldg constructed

In 1920 → 1960.

11-15-91

smg

123

Part Operations

- Used to be base operations for construction of Cadillac (entire car)

- 12/87 - stopped making

-entire car, now has

bumper - plating operations,

outer trim only. Most

trucks used for storing

(wave horses) mainly

administrative, vehicle

engineering.

- Plating operations due

to ceases in 4/92 -

will be strictly admin.

and engineering ctr

(world HQ)

124

11-5-91

Aug

- Foundry used to exist, up to 1950's
- machining, stamping, assembly of smaller parts → full size vehicle

Wastes Generated

- paint wastes, solvents (no longer generated)
- some plating wastes - acid alkalis, cyanide solns → on-site water treatment plant (generate 1000 sludge)
- disposed of off-site
- Container Storage Area - ~1980, submitted closure plan 1988-89

11-5-91

Aug

125

- Container Storage Area - cont'd
- Was not yet had closure plan approved, and certified. Some contain.

soil wassms to be removed.

- mostly handled waste paint solvents
- ATM there, no haz. waste currently stored there
- no documented releases, but some contamination observed (soil).
- VST - 26
- old tank removed, new tank in its place (260A), same size as old VST, upgraded (double-walled)

166 11-15-91

Smg

36A

• UGT 36A - cont'd

- new tank installed 1/91

• WWT Plant

- facility will provide flow diagram

- will probably not shut down with closure

of production - receives run-off from entire facility.

• Plating Reclaim Units

- used to reconcentrate metals, Cu, Ni, etc.

• Paint Sludge Dewatering Filter

- associated w/ painting operations, which ceased in 1988.

11-15-91

Smg

127

• Paint Sludge - cont'd

- was considered non-haz.

• Boiler Sludge Incinerator

- removed after main operations shut down, ~1988.

- installed around early 1980's

- used to clean (burn off) racks used to hold small parts.

- Log due to F006

- Permitted to discharge to city of Detroit sewer system (DWSD)

- PCB transformers removed

- Air-permitted for plating operations, WWT

021

16-51-11

Sung

• UST-77

was removed (not replaced)

• Facility tour began 10:40

• Photo 11, 12 former drumstorage area, diked
area, sump leads to

KWT

Photo 3 - roll-offs -

contains air pollution

scrubber sludge from

plating operations

(non-haz.)

Photo 4:15

• current haz. waste storage

area

• ramped, bermed, no
sump.

16-51-11

Sung

021

Photo 6 - photo of
entire KWT (from photo)Photo 7, 8, 9, 10

KWT (from catwalk)

Photo 11, 12

Opposite side of KWT

Photo 13 -roll-offs containing sludge
from filter pressPhoto 14

UST-36A

Photo 15

former location of UST-77

Photo 16, 17 -

former location of Blue

snuff incinerator. Photo 17

shot upwards, where

~~snuff~~ chute used to extend

Pro 11-15-91

Sung

Photo 12

- air scrubber/bin, used to collect dust from

- plating operations

- Cu Reclaim

- Soln in use
- acid-Cu plating bath pumped into these tanks, Cu ppt ed out (into sheets which were sold as scrap), soln to WWT

- same tank also used for Ni reclaim - except final bath was allowed to ↑ in conc., pumped to tank for storage where soln would be shipped off-site (Ni was eventually reclaimed)

Sung

11-15-91

131

- Cyanide Rinsing Storage

- soln drained into area → drums → WWT

photo 19

Cu/Ni reclaim tank

photo 20

grating of "wet floor" where Cyanide soln drained to WWT

photo 21

holding tank for Cyanide soln

photo 22

satellite accumulation - may contain different caustic cleaners used to clean different machine parts.

132

11-15-91

smg

- Facility tour concluded @ 12:15. Explained how facility might obtain the report (and when to expect it).
- If have more questions concerning operations call Bridget Persinger.

~~Sherry Gunkel~~

11-15-91

smg

133



Fred W. Rindhege, P.E.
Sr. Staff Engineer
Facilities and Methods
Engineering

Buick-Oldsmobile-Cadillac Group
General Motors Corporation
30009 Van Dyke Avenue
Warren, Michigan 48090

(313) 947-9240 8-227-9240
Fax (313) 947-9246

~~Sherry Gunkel~~



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

SHR-12

October 30, 1991

Bridget Reisinger
Senior Environmental Engineer
Cadillac Motor Car Division
General Motors Corporation
2860 Clark Street
Detroit, Michigan 48232-0297

Re: Visual Site Inspection
GMC Cadillac Motor Car
Clark Plant
Detroit, MI
MID005356704

Dear Ms. Reisinger:

The United States Environmental Protection Agency (U.S. EPA) Region V will conduct a Preliminary Assessment including a Visual Site Inspection (PA/VSI) at the referenced facility. This inspection is conducted pursuant to the Resource Conservation and Recovery Act, as amended (RCRA) Section 3007 and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA) Section 104(e). The referenced facility has generated, treated, stored, or disposed of hazardous waste subject to RCRA. The PA/VSI requires identification and systematic review of all solid waste streams at the facility. The objective of the PA/VSI is to determine whether or not releases of hazardous wastes or hazardous constituents have occurred or are occurring at the facility which may require further investigation. This analysis will also provide information to establish priorities for addressing any confirmed releases.

The visual site inspection of your facility is to verify the location of all solid waste management units (SWMUs) and areas of concern (AOCs) to make a cursory determination of their condition by visual observation. The definitions of SWMUs and AOCs are included in Attachment I. The VSI supplements and updates data gathered during a preliminary file review. During this site inspection, no samples will be taken. A sampling visit to ascertain if releases of hazardous waste or constituents have occurred may be required at a later date.

October 30, 1991
Ms. Reisinger
Page 2


Assistance of some of your personnel may be required in reviewing solid waste flow(s) or previous disposal practices. The site inspection is to provide a technical understanding of the present and past waste flows and handling, treatment, storage, and disposal practices. Photographs of the facility are necessary to document the condition of the units at the facility and the waste management practices used.

The VSI has been scheduled for November 15, 1991. The inspection team will consist of personnel of PRC Environmental Management, Inc., a contractor for the U.S. EPA. Representatives of the Michigan Department of Natural Resources (MDNR) may also be present. Your cooperation in admitting and assisting them while on site is appreciated.

The U.S. EPA recommends that personnel who are familiar with present and past manufacturing and waste Management activities be available during the VSI. Access to any relevant maps, diagrams, hydrogeologic reports, environmental assessment reports, sampling data sheets, environmental permits (air, NPDES), manifests and/or correspondence is also necessary, as such information is needed to complete the PA/VSI.

If you have any questions, please contact me at (312) 886-4448 or Sheri Bianchin at (312) 886-4446. A copy of the Preliminary Assessment/Visual Site Inspection Report, excluding the conclusions and Executive Summary portion may be made available upon request.

Sincerely yours,



Kevin M. Pierard, Chief
OH/MN Technical Enforcement Section

Enclosure

cc: Ben Okwumabua, MDNR - Livonia
Ken Burda, MDNR - Lansing
Dennis Drake, MDNR - Lansing

ATTACHMENT I

The definitions of solid waste management unit (SWMU) and area of concern (AOC) are as follows.

A SWMU is defined as any discernable unit where solid wastes have been placed at any time from which hazardous constituents might migrate, regardless of whether the unit was intended for the management of a solid or hazardous waste.

The SWMU definition includes the following:

- RCRA regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that U.S. Environmental Protection Agency has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents, such as wood preservative treatment dripping areas, loading or unloading areas, or solvent washing areas

An AOC is defined as any area where a release to the environment of hazardous wastes or constituents has occurred or is suspected to have occurred on a nonroutine or nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

HRE-8J

FEB 12 1992

Ms. Bridget Reisinger
Senior Environmental Engineer
General Motors Corporation
Cadillac Motor Car Division
286D Clark Street
Detroit, Michigan 48232

Re: GMC Cadillac Motor Car
MID DD5 356 7D4

Dear Ms. Reisinger:

Per your request of February 6, 1992, enclosed please find a copy of the Preliminary Assessment/Visual Site Inspection for the referenced facility.

The executive summary and conclusions and recommendations section have been withheld as enforcement confidential.

If you have any questions, please contact me at (312) 886-4448.

Sincerely yours,
ORIGINAL SIGNED L
KEVIN M. PIERARD

Kevin M. Pierard, Chief
Minnesota/Ohio Technical Enforcement Section
RCRA Enforcement Branch

Enclosure

HRE-8J:FHARRIS:6-2884:2/11/92:MASTER.RES

OFFICIAL FILE COPY

CONCURRENCE REQUESTED FROM REB			
OTHER STAFF	REB STAFF	REB SECTION CHIEF	REB BRANCH CHIEF
	FH 2/11/92	<i>[Signature]</i> 2/12/92	

Handler Name: _____
ID Number: _____
Inspector: _____
Date: _____

- c. If waste is subject to nationwide variance [268.30] (e.g., solvent-water mixtures less than 1%), case-by-case extension [268.5] or petition [268.6] does generator provide notice to disposer that waste is exempt from land disposal restrictions [268.7(a)(3)]?

Comments

____ Yes ____ No

Storage of F-Solvent Waste

1. Was F-solvent waste stored for greater than 90 days (after variance 180/270 days for SOG) [268.50(a)(1)]?

____ Yes ☒ ____ No

If yes, was facility operating as a TSD under interim status or final permit? ____ Yes ____ No

If yes, TSDF Checklist must be completed.

Treatment Using RCRA 264/265 Exempt Units or Processes
(i.e., boilers, furnaces, distillation units, wastewater treatment tanks, etc.)

Were treatment residuals generated from RCRA 264/265 exempt units or processes? ____ Yes ____ No

If yes, list type of treatment unit and processes

If the residuals from a RCRA-exempt treatment unit are above the treatment standards, the owner/operator is considered a generator of restricted waste. The inspector should determine whether the generator requirements, particularly waste identification requirements, have been met for the treatment residuals.

ENFORCEMENT
CONFIDENTIAL

CORRECTIVE ACTION STABILIZATION QUESTIONNAIRE

Completed by: Mary Wojciechowski
Date: March 12, 1992

RECEIVED
WHD RECORD CENTER

OCT 13 1992

Background Facility Information

Facility Name: GMC Cadillac Motor Car, Clark Plant
EPA Identification No.: MID 005 356 704
Location (City, State): Detroit, Michigan
Facility Priority Rank: Low

1. Is this checklist being completed for one solid waste management unit (SWMU), several SWMUs, or the entire facility? Explain.

Entire facility - 11 SWMUs

Status of Corrective Action Activities at the Facility

2. What is the current status of HSWA corrective action activities at the facility?

- ☐ No corrective action activities initiated (Go to 5)
☒ RCRA Facility Assessment (RFA) or equivalent completed
☐ RCRA Facility Investigation (RFI) underway
☐ RFI completed
☐ Corrective Measures Study (CMS) completed
☐ Corrective Measures Implementation (CMI) begun or completed
☐ Interim Measures begun or completed

3. If corrective action activities have been initiated, are they being carried out under a permit or an enforcement order?

- ☐ Operating permit
☐ Post-closure permit
☐ Enforcement order
☒ Other (Explain)

Corrective action formerly took place under state and federal UST programs and is still underway in conjunction with RCRA closure activity for a container storage area.

4. Have interim measures, if required or completed [see Question 2], been successful in preventing the further spread of contamination at the facility?

- ☒ Yes for the USTs
☐ No
☒ Uncertain; still underway - for the RCRA unit
☐ Not required

Additional explanatory notes:

The facility is awaiting MDNR approval of a remediation plan for contamination discovered during RCRA closure of a container storage area.

Facility Releases and Exposure Concerns

5. To what media have contaminant releases from the facility occurred or been suspected of occurring?

- ☐ Ground water
☐ Surface water
☐ Air
☒ Soils

6. Are contaminant releases migrating off-site?

- ☐ Yes; Indicate media, contaminant concentrations, and level of certainty.

Groundwater:

Surface water:

Air:

Soils:

- ☐ No
☒ Uncertain - for container storage area

- 7a. Are humans currently being exposed to contaminants released from the facility?

- ☐ Yes (Go to 8a)
☒ No
☐ Uncertain

Additional explanatory notes:

Exposure is not likely due to low permeability of soils in the area.

- 7b. Is there a potential for human exposure to the contaminants released from the facility over the next 5 to 10 years?

- ☐ Yes
☒ No
☐ Uncertain

Additional explanatory notes:

Exposure is not likely due to low permeability of soils in the area.

- 8a. Are environmental receptors currently being exposed to contaminants released from the facility?

- ☐ Yes (Go to 9)
☒ No
☐ Uncertain

Additional explanatory notes:

Exposure is not likely due to low permeability of soils in the area.

- 8b. Is there a potential that environmental receptors could be exposed to the contaminants released from the facility over the next 5 to 10 years?

- ☐ Yes
☒ No
☐ Uncertain

Additional explanatory notes:

Exposure is not likely due to low permeability of soils in the area.

Anticipated Final Corrective Measures

9. If already identified or planned, would final corrective measures be able to be implemented in time to adequately address any existing or short-term threat to human health and the environment?

☐ Yes
☒ No
☐ Uncertain

Additional explanatory notes:

Removal of contaminated soils in former container storage area in accordance with a remediation plan awaiting MDNR approval would adequately address any threat to human health and the environment.

10. Could a stabilization initiative at this facility reduce the present or near-term (e.g., less than two years) risks to human health and the environment?

☐ Yes
☒ No
☐ Uncertain

Additional explanatory notes:

Removal of contaminated soils in former container storage area in accordance with a remediation plan awaiting MDNR approval would adequately address any threat to human health and the environment.

11. If a stabilization activity were not begun, would the threat to human health and the environment significantly increase before final corrective measures could be implemented?

☐ Yes
☒ No
☐ Uncertain

Additional explanatory notes:

Removal of contaminated soils in former container storage area in accordance with a remediation plan awaiting MDNR approval would adequately address any threat to human health and the environment.

Technical Ability to Implement Stabilization Activities

12. In what phase does the contaminant exist under ambient site conditions? Check all that apply.

☐ Solid
☒ Light non-aqueous phase liquids (LNAPLs)
☐ Dense non-aqueous phase liquids (DNAPLs)
☐ Dissolved in ground water or surface water
☐ Gaseous
☐ Other _____

13. Which of the following major chemical groupings are of concern at the facility?

☒ Volatile organic compounds (VOCs) and/or semi-volatiles
☐ Polynuclear aromatics (PAHs)
☐ Pesticides
☐ Polychlorinated biphenyls (PCBs) and/or dioxins
☐ Other organics
☐ Inorganics and metals
☐ Explosives
☐ Other _____

14. Are appropriate stabilization technologies available to prevent the further spread of contamination, based on contaminant characteristics and the facility's environmental setting? [See Attachment A for a listing of potential stabilization technologies.]

☐ Yes; Indicate possible course of action.

☒ No; Indicate why stabilization technologies are not appropriate; then go to Question 18.

It is currently not known if soil contamination remains at the facility.

15. Has the RFI, or another environmental investigation, provided the site characterization and waste release data needed to design and implement a stabilization activity?

☐ Yes
☐ No

If No, can these data be obtained faster than the data needed to implement the final corrective measures?

☐ Yes
☐ No

Timing and Other Procedural Issues Associated with Stabilization

16. Can stabilization activities be implemented more quickly than the final corrective measures?

☐ Yes
☐ No
☐ Uncertain

Additional explanatory notes:

17. Can stabilization activities be incorporated into the final corrective measures at some point in the future?

☐ Yes
☐ No
☐ Uncertain

Additional explanatory notes:

Conclusion

18. Is this facility an appropriate candidate for stabilization activities?

- ☐ Yes
☒ No, not feasible
☐ No, not required

Explain final decision, using additional sheets if necessary.

It is currently not feasible to determine the need for stabilization. In 1985, contaminated soil associated with a release of hydraulic oil from a trash compactor was removed. No soil sampling was done to verify that this cleanup was adequate. It is current unknown if contamination still exists.

[illegible]